# EXAMPLES OF MODES AND MODELS

This part distinguishes six modes of consultancy and describes associated models using the following standard outline.

- I The story of the model's development
- II Knowledge informing the model, element (a).
- III Praxis of the model, element (b).
- IV Application: work settings to which the model is applicable, element (c).
- V Understanding of the consultor's work, element (d).
- VI Principles element (e).
- VII A summary of key features of the model.

The modes are the:

- Systemic mode (Chapter Three)
- Development mode (Chapter Four)
- Organizational and management mode (Chapter Five)
- Non-directive approach to work mode (Chapter Six)
- Psychological process mode (Chapter Seven)
- Complexity and chaos mode (Chapter Eight)

The choice of models was clearly restricted to those written up in accessible accounts.

## CHAPTER THREE THE SYSTEMIC MODE AND MODELS

This chapter is about a mode of consultancy based upon a systemic understanding of human relationships and organizations. So it is about systems, groups of complexly interrelated elements, and systemic thinking in consultancy praxis sometimes referred to as "systems thinking". Two models are described to illustrate this mode. The first distinguishes between two schools of systems thinking and raises fundamental questions about systemic consultancy models and therefore, provides useful background to much that follows. The second draws heavily on systemic family therapy.

However, the models in this chapter do not have the monopoly on systemic thinking. I, for instance, use it as can be seen in Chapter VI Model 1. But I notice that, amongst others, Edgar H. Schein does not use systems thinking (see Chapter V Model 1) and neither does Milan Kubr in his monumental work, *Management Consulting* (see Chapter V Model 2). Kubr uses "systems" in a quite different way to describe operational structures such as management, planning, control, financial and consulting systems.

## Model One: Soft Systems Methodology

## I The Story of the Model's Development

This approach goes back to the 1970's and comes out of the University of Lancaster, the Department of Systems and Information Management. (Gareth Morgan who has contributed enormously to new thinking about organizations including considering them as systems, was at Lancaster around this time.) When Gwilym Jenkins went to Lancaster in the mid 1960's he established a Department of Systems Engineering which took hard systems engineering as a declared framework. An action research programme pursued in the Department demonstrated that the methodology works on mechanical systems but not on messy human problem situations.<sup>2</sup> A "soft systems" approach to systems thinking began to emerge. Then, in contradistinction to *Hard Systems Methodology* (ISSM).

### II Knowledge Informing the Model [element (a)]

SSM is systemic in two senses: it is a systemic (as well as a systematic) process of enquiry; it makes use of "systems models".<sup>3</sup> Figure 3:1 is a diagram Checkland and Scholes (C and S) use to illustrate the change from HSM to SSM. They refer to diagrams such as these which they use extensively as "rich pictures" because they claim "they are a better means for recording relationships and connections than is linear prose".<sup>4</sup> C and S distinguish between:

- har systems thinking which assumes the world *to be* a system, a position which they say pretends to knowledge no human being can have;<sup>5</sup>
- sof systems thinking which chooses to think about the world *as if it were* a system.<sup>6</sup>

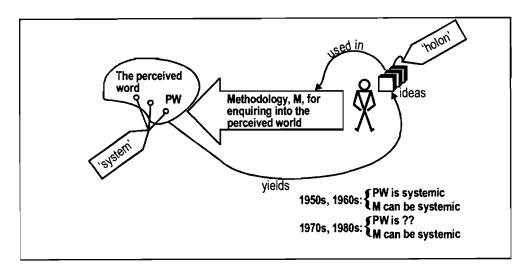


Figure 3:1: The shift in systemicity between systems engineering and SSM<sup>7</sup>

They rigorously pursue a soft systems thinking approach which they deploy through consultancy procedures outlined below. In doing so they say, "There is no automatic assumption that the real world is systemic. If part of the real world is to be a system to be engineered, then that is by conscious choice".<sup>8</sup>

"Holon" is one of the words suggested by C and S (see in Figure 3:1) as a new word for the abstract concept of a whole as an alternative to the use of the word system. C and S think its wider use would clarify the whole field of systems thinking and especially if the field became known as "holonic thinking" or "thinking with holons".<sup>9</sup> They assume methodologies can be treated as holons: SSM, they say, is "a cyclic methodology which is itself systemic (we would better say, holonic) process, one which within its procedures happens to make use of models of holons".<sup>10</sup>

The various definitions of what constitutes a system "take as given the notion of a set of elements mutually related such that the set constitutes a whole having properties as an entity". An associated idea is that "the whole may be able to survive in a changing environment by taking control action in response to shocks from its environment".<sup>11</sup>

## III Praxis of the Model [element (b)]

In this section the modus operandi and the operational modes are described along with the associated practice theory.

#### 1. Modus Operandi: how the model works

S and C express and expound SSM, "an organized version of doing purposeful thinking", as a seven-stage process or methodology.<sup>12</sup> Initially it was seen as a seven-stage problem-solving methodology, but now it is seen as one option in a more general approach to trying to tackle coherently the problematic situations in which consultors find themselves in professional or private life.<sup>13</sup> A diagram they use to express it is reproduced in Figure 3:2. The stages have been numbered to clarify the sequence of the stages.

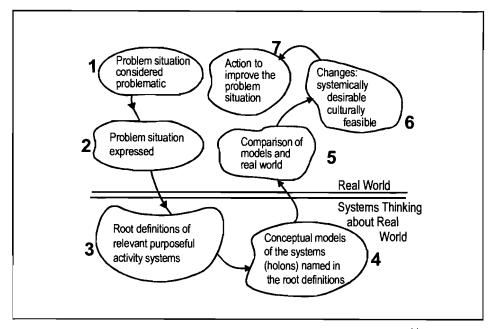


Figure 3:2: The conventional seven-stage model of SSM <sup>14</sup>

The double horizontal line in the diagram is an important reminder of the differences between involvement in the world and reflection upon it and the nature of creative interaction between them. It emphasizes the vital distinction between unreflecting involvement in the everyday world (the unfolding flux of events and ideas) and conscious thinking about the real world. SSM methodology alerts consultants and consultors to movements they make to and from one world to the other.<sup>15</sup> And this is so, even though thinking about the real world is a real part of the everyday world.

Effective purposeful activity induces "transformation processes" which transform entity inputs to entity outputs. C and S elaborate this point in the following note.

The error here is to name the input and output as verbs instead of entities. Actions do not get transformed into anything; they may *lead* to conclusions or other actions, but 'lead to' is a different concept from 'are transformed into': a causal sequence is not the same as a transformation. It is vitally important always to express inputs and outputs as entities; the concept of 'transforming' demands it.

An input-output transformation is, on its own, too bald to be modelled richly, and root definitions came to be written as sentences elaborating the core transformation. Smyth and Checkland (1976) researched historical root definitions [the core purpose of a purposeful activity system] and suggested that well-formulated root definitions should be prepared by consciously considering the elements .... [that] make the word CATWOE, and much experience has shown this to be a most useful mnemonic.<sup>16</sup>

The mnemonic is expanded in this way:

**C** 'customers': the victims or beneficiaries of transformation (T);

A 'actors': those who would do T;

T 'transformation: the conversion of input to output process';

W 'weltanschauung': the worldview which makes this T meaningful in context;

**O** 'owner(s)': those who could stop T;

E 'environmental constraints': elements outside the system taken as given.<sup>17</sup>

"The core of CATWOE", say C and S, "is the pairing of transformation process T and the W, the *weltanschauung* or worldview which makes it meaningful. For any relevant purposeful activity there will always be a number of different transformations by means of which it can be expressed, these deriving from different interpretations of its purpose".<sup>18</sup>

Soft Systems Methodology in Action is an exciting read because it is the inner story of more than a decade of the evolution of a living consultancy system punctuated by moments of profound insight and disclosure: at one point C and S speak of the scales falling from their eyes. It is a form of consultancy praxis which is a medium of life and energy through the commitment of its inventors and practitioners to cycling between theory and practice<sup>19</sup> and to research and reflection in action and beyond it. C and S put it this way:

The book is written in the belief that neither theory nor practice should dominate the other. This is a cogent issue for the systems movement, which is a field very prone to rather vapid theorizing of a broadly holistic kind. Theory which is not tested out in practice is sterile. Equally, practice which is not reflective about the ideas upon which it is based will abandon the chance to learn its way steadily to better ways of taking action. Thus, theory must be tested out in practice; and practice is the best source of theory. In the best possible situation the two create each other in a cyclic process in which neither is dominant but each is the source of the other. This book recounts some experiences of trying to move round that cycle, and it is written out of a number of experiences in organizations of different kinds, in both public and private sectors.<sup>20</sup>

So SSM, a dynamic form of praxis, is alive. It gains new life through its effective application to consultors and their situations. Consequently the understanding and use of it is ever changing. Following through the emergence of new insights from their embryonic to mature expressions is fascinating.

#### 2. Operational Modes

Collaboration between people in the problem situation and outsiders equipped with SSM has generally proved to be the best way of practising this form of consultancy. Together, they say, in relation to a particular consultation, a "joint insider-outsider problem solving team tackle a messy problem situation".<sup>21</sup> As would be expected the collaboration took on different forms. In one project, the Information and Library Service in the ICI Organics Division Board, the director required that the study was carried out internally through three managers, who initially knew nothing of SSM, with the enabling help of the Lancaster Staff, Checkland and Scholes and colleagues. They said that they did not want to be "Lancastrated".<sup>22</sup> Initially the Lancaster staff was apprehensive about this arrangement but it led them to be more aware

of the process of using SSM and eventually led to an extended project with the Shell Group which was "orchestrated by two Shell Managers, with Checkland as an outside adviser but .... carried out by a large number of Shell Managers".<sup>23</sup> However, most of the work was done through outsider and insider teams collaborating.

The outside Lancastrian teams operated through working with and alongside clients (the people who commissioned the consultancy project or study), client teams and appointed members of their organization or workforce. Amongst other things this involved meetings, workshops and presentations. It also involved extensive interviewing which enabled them to understand, conceptualize and model situations particularly through rich pictures. Illustrations of these pictures have already been given but a typical example from the studies is presented in Figure 3:3. (The original was hand written.) Some of these models were deceptively simple, more so than acquiring the experience which gave them the confidence in their relevance and usability!<sup>24</sup> These rich pictures were highly effective in making presentations which stimulated and helped people to get a better conceptual grasp on their situations and work at the implications of what they saw.

In the first sequence of projects Checkland and Scholes worked together as outside consultants on special "studies" in industry, the National Health Service and the Civil Service. Subsequently, Scholes became a manager in a major computer supplier, ICL, the UK's largest computer company. This led to new thinking about SSM and led C and S to see that:

SSM is not always used as the methodology for a special study somewhat outside the normal run of day-to-day managerial work; it is used also as a managerial aid by a manager going about his normal work.<sup>25</sup>

A further insight led them to differentiate between the external and internal uses of SSM. Scholes observed that a postgraduate student "was using SSM more as an internalized set of guidelines which helped the attack on a complex of problems". Commenting on this C and S say:

Perhaps we are saying here no more than that the apprentice has to go through a process in which a craft skill is absorbed and internalized before it can be truly exercised. The schoolboy batsman learning the craft of cricket thinks consciously about getting his left foot to the pitch of a good length ball, keeping his left elbow up and swinging his bat through a vertical arc. Only when he has stopped thinking consciously about these things and has converted them into what Polanyi calls 'tacit knowledge' can he begin to be a real batsman.<sup>26</sup>

Further reflection led C and S to the following observation:

During the [second] sequence of systems studies... the authors gradually became increasingly aware that SSM does not have to be thought of exclusively as a way of doing special projects, although it is perfectly serviceable in that cause. They became aware that as a result of having absorbed SSM to the extent that it had become tacit knowledge, they were using it flexibly, at several different levels, and on many different timescales, from an hour or two ... to several months.

Pushing this train of thought to extremes, it is clear that the least formal, least public, meta-level use of SSM would be to use it inside one's head as a takenas-given thinking mode. The authors 'found themselves' using it in this way

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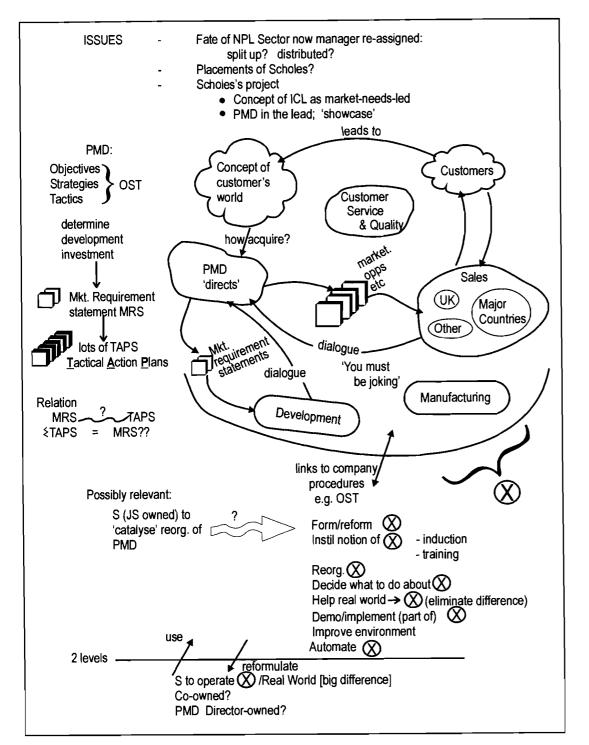


Figure 3:3: An Example of Rich Picture Modelling in the "Studies": Picturing the Context of the ICL Way Programme<sup>27</sup>

many times during the studies in ICL. But such uses are by definition private, not public, and hence are not subject to any kind of scrutiny or testing by others. Such uses only become examinable when they at least produce some tangible outputs...<sup>28</sup>

Further important distinctions in the use of SSM are made in an overall reflective piece on the ten studies in which they identify two modes.

Mode 1: mentally starting from SSM and using it to structure what is done i.e. a formal stage-by-stage application of the methodology. This they call an *intervention mode*.

**Mode 2**: mentally starting from what is to be done and mapping it on to SSM Making sense of it through SSM i.e. the internal mental use of it as a thinking mode. This they call an *interaction mode*.<sup>29</sup>

Both modes, they say, are "'ideal types' in terms of which SSM use may be described, rather than descriptions of actual uses".<sup>30</sup> Reviewing the studies they assess that two are "near Model", four are "mixed" and four are "near Mode 2" (including those in which Scholes was an ICL manager).<sup>31</sup>

# IV Application: Work Settings to which the Model is Applicable [element (c)]

SSM evolved first from work in industrial companies and then from work in other organizations.<sup>32</sup> C and S give three reasons for this: the original group was a Department of Systems Engineering; industrial companies were receptive to the ideas; industrial companies for all their complexity are much simpler than a local authority or a Civil Service Department in relation, for instance, to measuring performance.<sup>33</sup>

C and S demonstrate the applicability of the SSM methodology through the ten selected "studies". (To all intents and purposes studies are what are commonly referred to as consultancies or consultancy commissions or projects. C and S use consultancy terminology but only sparingly. Studies are what others would describe as "case studies" or "case histories".) These studies, described in considerable detail and thoroughly evaluated by C and S, demonstrate conclusively that the methodology works in three very different work domains: industry, the National Health Service and the Civil Service.<sup>34</sup> They concluded that "there is no *methodological* (their italics) differences between using SSM in industry and in the NHS".<sup>35</sup> A later statement would suggest that this is also true of the Whitehall project but in relation to this they say that "aspects of the study beyond the application of the methodology … required more attention than was usually the case in Industry".<sup>36</sup> More sophisticated attention, they say, had to be paid "to the *process of using SSM*" (again their italics), in the public sector because of the complexity of the problem situations.<sup>37</sup> All this indicates that its use in the voluntary and religious sectors would have to be researched as it was in the others.

## V Understanding of the Consultor's Work [element (d)]

Using the SSM methodology generates an in depth understandings of consultors' work situations which enable consultants to provide situationally related consultancy help. "Studies" are conducted either by using SSM to structure what is done (the "intervention" mode) or/and to interpret what is done (an "interactive" mode). Prior understanding of specific work situations is not therefore required. Basically, however, two things are required: understanding of systems and holons and the ways in which they function in consultors' work situations and settings; commitment to assiduous reflective involvement in consultors' everyday working worlds.

### VI Principles [element (e)]

In 1990, having described and analysed ten large consultancy projects and programmes in *Soft Systems Methodology In Action*, C & S re-formulated their understanding of SSM in a profound reflective piece. They set out their findings in a five-point statement and in a table which they claim defines SSM sufficiently for its use to be discussed coherently.<sup>38</sup> The statement and table are reproduced in Displays 3:1 and 3:2. These displays are tantalizing intimations of further developments. One relates to the possibility of SSM being used in a post-modern activity of constructing interpretations of the world which have no absolute or universal status.<sup>39</sup> Another states that "SSM was increasingly perceived not only as 'a way to do studies' but as 'a way to think about complexity".<sup>40</sup> (cf "The Complexity and Chaos Mode and Models", Chapter VIII.) What follows is an account of the new Constitutive Rules of SSM based upon all the experiences which underlie the writing of this book [*Soft Systems Methodology In Action*]. They are written in the form of an account of the family resemblances which characterize the whole spectrum of SSM use.

- 1. SSM is a structured way of thinking which focuses on some real-world situation perceived as problematical. The aim is always to bring about what will be seen as improvements in the situation, and this is true whether or not the work done is part of normal day-to-day managerial work (defining 'managerial' in the broad sense of managing anything) or a special highlighted study.
- 2. SSM's structured thinking is based on systems ideas, and its whole process has yielded an explicit epistemology. Any account of work which lays claim to being SSM-based *must be expressible in terms of that epistemology* whether or not SSM language was used as the work was done. The epistemology is summarized in... [Display 3:2.]. ('Expressible in terms of' does not mean that the whole process has to be followed each time SSM is used. But whatever gets done must be describable using the language of... [Display 3:2] regardless of the scope of it.)
- 3. The full claim of "SSM was used" (implying some version of the approach as a whole) ought to refer only to instances in which the following guidelines were followed.
  - (a) There is no automatic assumption that the real world is systemic. If part of the real world is taken to be a system to be engineered, then that is by conscious choice.
  - (b) Careful distinction is made between unreflecting involvement in the everyday world (the unfolding flux of events and ideas) and conscious systems thinking *about* the real world. The SSM user is always conscious of moving from one world to the other, and will do so many times in using the approach.
  - (c) In the systems thinking phases, holons are constructed. (These will usually take the form of purposeful 'human activity systems' which embody the four basic ideas: emergent properties, layered structure, processes of communication and control.)
  - (d) The holons are used to enquire into, or interrogate the real world in order to articulate a dialogue, discourse or debate aimed at defining changes deemed desirable and feasible.
- 4. Since SSM can be used in many different ways in different situations, and will in any case be interpreted somewhat differently by each user, any potential use of it ought to be characterized by conscious thought about how to adapt it to a particular situation.
- 5. Finally, and again because SSM is methodology, not technique, every use of it will potentially yield methodological lessons in addition to those about the situation of concern. The methodological lessons may be about SSM's framework of ideas, or its processes, or the way it was used, or all of these. The potential lessons will always be there, awaiting extraction by conscious reflection on the experience of use.

Display 3:1: New Constitutive Rules of SSM, c 1990<sup>41</sup>

Soft Systems Methodology		
Real World	The unfolding interacting flux of events and ideas experienced as everyday life.	
Systems thinking world	The world in which conscious reflection on the 'real world' using systems ideas takes place.	
Problem situation	A real-world situation in which there is a sense of unease, a feeling that things could be better than they are, or some perceived problem requiring attention.	
Analyses One, Two, Three	Analysis One: examination of the intervention or interaction in terms of the roles; 'client' (caused the study to take place), 'problem solver' (undertakes the enquiry) and 'problem owner' (plausible roles from which the situation can be viewed, chosen by the 'problem solver').	
	<i>Analysis Two</i> : examination of the social (cultural) characteristics of the problem situation via interacting roles (social positions), norms (expected behaviour in roles) and values (by which role-holders are judged).	
	<i>Analysis Three</i> : examination of the power-related (political) aspects of the problem situation via elucidation of the 'commodities' of power in the situation.	
Rich pictures	Pictorial/diagrammatic representations of the situation's entities (structures), processes, relationships and issues.	
Root definitions	Concise verbal definitions expressing the nature of purposeful activity systems regarded as relevant to exploring the problem situation. A full RD would take the form: do $X$ by $Y$ in order to achieve $Z$ .	
CATWOE	Elements considered in formulating root definitions. the core is expressed in T (transformation of some entity into a changed form of that entity) according to a declared <i>Weltanschauung</i> , W.C. (customers): victims or beneficiaries of T. A (actors); those who carry out the activities. O (owner): the person or group who could abolish the system. E (the environmental constraints which the system takes as given).	
The 5Es	Criteria by which T would be judged: Efficacy (does the means work?); Efficiency (are minimum resources used?); Effectiveness (does the T help the attainment of longer term goals related to O's expectations?); Ethicality (is T a moral thing to do?); Elegance (is T aesthetically pleasing?).	
Conceptual model	The structured set of activities necessary to realize the root definition and CATWOE, consisting of an operational subsystem and a monitoring and control subsystem based on the Es.	
Comparison	Setting the conceptual models against the perceived real world in order to generate debate about perceptions of it and changes to it which would be regarded as beneficial.	
Desirable and the feasible changes	Possible changes which are (systemically) desirable on the basis of learned relevance of the relevant systems, and (culturally) feasible for the people in the situation at this time.	
Action	Real-world action (as opposed to activity in conceptual models) to improve the problem situation as a result of operation of the learning cycle for which this epistemology provides a language.	

Display 3:2: SSM's Epistemology: the language through which its process makes sense <sup>42</sup>

SSM emerges as a flexible, evolving methodology to be used by inside and outside consultants, formally and/or informally as an internal and/or external facilitating structure. All this emerged through "more sophisticated attention being paid to *the process of using*  $SSM^{*}$ .<sup>43</sup> The description of the model indicates the bodies of knowledge upon which it draws. In summary form they are: hard and soft systems theory, analysis and methodology; holonic thinking; information systems and theory; reflective praxis; management science.

## VII A Summary of Key Features of the Model

Basic elements of SSM are modelled in Figure 3:4 using the diagrammatic design to modelling consultancy praxis described in Chapter Two.

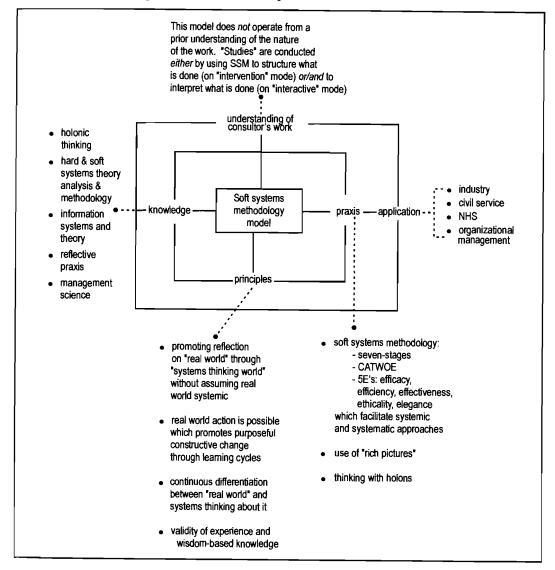


Figure 3:4: A Diagrammatic Representation of Fundamentals of the SSM Model

## Model Two: Systems Consultation and Systemic Family Therapy

## I The Story of the Model's Development

This section is about a particular form of systemic consultancy developed in America described in a book edited by Lyman C Wynne, Susan H McDaniel and Timothy T Weber entitled *Systems Consultation: A New Perspective for Family Therapy.*<sup>1</sup> (The first editor'sname is used when referring to this book.) "Systems Consultation", a generic term, is used in the USA to describe forms of consultancy which draw upon the principles and practices of systemic family therapy.

Systems Consultation (SC) was developed during the same period that SSM evolved but it differs from it significantly. It is one of the systemic models that emerged as therapists began to discern with some excitement the relevance of their systemic praxis first to the institutional systems in which they and their patients were variously engaged and involved and then to organizations and businesses generally. Consequently, roots of *Systems Consultation* are in "systemic family therapy" and not least in the work of "The Milan Model" which Professor Mara Palazzoli played a key role in developing.

Palazzoli has been described as "the doyenne and diva of the international family therapy world".<sup>2</sup> She pioneered the development of systemic family therapy in the late 1960's from her base in the centre for Family Studies in Milan. She was influenced by Gregory Bateson.<sup>3</sup> By 1974 the systemic approach was a core element in their clinical practice and research. Palazzoli was a doctor, a psychoanalyst, a systemic family therapist and a worldwide authority on family systems and family therapy. Then, in 1972, she convened a group of educational psychologists to study behaviour in large organizations, businesses and institutions and the application to them of what she was learning from systemic family therapy. Systemic family therapy had moved into systemic consultancy to organizations and businesses. Some of the work which followed is described and analysed in *The Hidden Games of Organizations*.<sup>4</sup>

Undoubtedly, Palazzoli and her team have had a profound and widespread influence on many different forms of consultancy. She has influenced several of the models described in this book including the form of consultancy I practice.<sup>5</sup> In the UK pioneering work has been done in developing systemic consultancy and promoting systemic management by Peter Lang and Martin Little who formed the Kensington Consultation Centre now known as the KCC Foundation.<sup>6</sup> Initially they drew heavily on the work of Palazzoli and Maturana.

## II Knowledge Informing the Model [element (a)]

## 1. Milan's Systemic Family Therapy Praxis

Systemic family therapy praxis is a primary source to Systems Consultation. Palazzoli and her colleagues established three principles that they "considered indispensable to interviewing the family correctly".<sup>7</sup> These principles – or approaches and methods – derive from using their understanding of systems theory to treat families systemically. They are key to their praxis and to the use of their model in organizations.

*Hypothesizing* Hypotheses are hunches, ideas or theories, stated clearly and adopted tentatively, which account for the available information and which serve as starting points and guides for further exploration in analysis and design. Palazzoli says of their understanding and use of hypotheses:

By hypothesizing we refer to the formulation by the therapist of an hypothesis based upon the information he (sic) possesses regarding the family he is interviewing. The hypothesis establishes a starting point for his investigation as well as his verification of the validity of this hypothesis based upon specific methods and skills. If the hypothesis is proven false, the therapist must form a second hypothesis based upon the information gathered during the testing of the first.<sup>8</sup>

All this is true of hypotheses and hypothesizing in general but in systemic family therapy the *hypotheses must be systemic:* they must, therefore, "include all components of the family and must furnish us with a supposition concerning the total relational function"<sup>9</sup> Such hypotheses relate to human socio-religious systems and the functional, structural and affective relationships between their members and parts.<sup>10</sup> An extract from a session which illustrates this is reproduced in Display 3:3.

We must keep in mind that a family therapy session always begins with the therapist possessing a certain amount of information concerning the family. In our practice at the Milan Family Center (sic) we have at our disposition, even before the first session, certain standard data recorded during the initial contact with either the family or referring doctor\*. Even in contexts different from ours, the therapist will always have a modicum of information on which to base an initial hypothesis. Let us consider an example.

A short time ago, we were invited by an institute specializing in family therapy to give a live demonstration of our style of work with families. Our first session was with a small family of two members, a divorced mother of 37 years and her 13 year old son. The information registered at the time of the family's initial contact with the institute was sparse. The mother had called several months before on the eve of the summer holidays requesting a consultation concerning her son, who, in her words, was difficult to control, rebellious, rude, and prone to delinquent behaviour (he had stolen change from her purse). On the basis of this little information, our team formulated an hypothesis during our standard presession discussion: the behaviour of the boy could be a way of trying to get the father to come back to the family. Conforming to this hypothesis, we decided to spend little time listening to the mother's complaints of the boy's misbehaviour and instead to focus our questions on their relationship with the absent father. During the interview, this hypothesis was rapidly disproved but we were able to formulate a second hypothesis. The mother was an attractive and charming woman, and, perhaps after all those years of maternal dedication, she had met "another man", and perhaps her son was jealous and angry and was showing it through his misbehaviour.

Our second hypothesis hit the target. For the past few months, the mother had been dating a "friend". While she was telling us this, the boy, quiet until that point, began to get restless and seemed on the verge of crying. When questioned, he said, "Mom isn't the same with me anymore – she's all wrapped up in herself- she really doesn't listen to me like she used to..." While her son gave vent to his grief, the mother remained silent and appeared confused and somewhat guilty. The therapeutic conclusion to this session was by now clear to us, pointed out by the behaviour of both mother and son. Both of them had growing pains to deal with and should expect to suffer in the near future. They needed time to accept the prospect of separation without feeling abandoned or guilty.

This example demonstrates how the two hypotheses formulated by the therapists and the questions asked in order to verify them led to the information essential for a choice of a therapeutic intervention. \* Name, age, profession and scholastic degrees of father, mother, and children in order of birthdates; date of marriage of parents; other members of family living with the above; problem; referring doctor; name of person making contact with the Centre.

Display 3:3: Example of the Use of Systemic Hypotheses in a Family Therapy Session <sup>11</sup>

Two systemic hypotheses I formulated about two consultors' situations give a briefer example and demonstrate the application of the method to organizations:

The movement from strong central control to shared control and openness in the diocese has disturbed its stability and made it volatile: it is essential to identify just what needs to be done to generate the homeostasis (or equilibrium) the system now needs.

The diocesan system is not working as well as it might do because key figures are not able to work to both the parochial and diocesan systems; they focus on one or the other but not on both.<sup>12</sup>

These examples show that such hypotheses are about multiple and systemic causation rather than linear causation.<sup>13</sup>

### Circularity<sup>14</sup>

Circularity, as defined and practised by Palazzoli and her colleagues, is a method for exploring the way in which members of a family behave towards each other and interrelate. Feedback from family members is used to solicit information about the systemics of family life. An example illustrates. It is from a conversation between a therapist and a child concerning the paternal parents who live with the family.

We live together with my grandparents and they're real naggers.	
What do they do that makes them naggers?	
They keep interfering with our parents, telling them what to do with us	
Who interferes the most, your grandfather or your grandmother?	
Grandpa.	
Whom does he interfere with the most, your mother or your father?	
With my father.	
And who gets bugged the most when your grandfather interferes, your father or your mother?	

Son: Oh, Mom of course! She wants Dad to tell him off...<sup>15</sup>

Brief as this extract is, it shows how the therapist gradually teased out the dynamics of the systemic interaction between members of the family, howbeit from the perspective of one member. Had other members been present, as they often would be, the son's perspective could have been checked out and other perspectives teased out in a similar way. Commenting on circularity Palazzoli says:

Every member of the family is invited to tell us how he (sic) sees the relationship between two other members of the family. Here we are dealing with the investigation of a dyadic relationship as it is seen by a third person. One will readily agree that it is far more fruitful, in that it is effective in overcoming resistance, to ask a son, "Tell us how you see the relationship between your sister and your mother", than to ask the mother directly about her relationship with her daughter. What is perhaps less obvious is the extreme

efficiency of this technique in initiating a vortex of responses in the family that greatly illuminate the various triadic relationships. In fact, by formally inviting one member of the family to metacommunicate about the relationship of two others, in their presence, we are not only breaking one of the ubiquitous rules of dysfunctional families, but we are also conforming to the first axiom of the pragmatics of human communication. In a situation of interaction, the various participants, try as they might, cannot avoid communicating.<sup>16</sup>

Amongst other things the method involves soliciting information in terms of "specific interaction behaviour in specific circumstance (and not in terms of feelings or interpretations)" and it is about "change in the relationship (or better in behaviour indicative of change in the relationship) before and after a precise event (diachronic investigation)".<sup>17</sup>

#### Neutrality

For Palazzoli *neutrality* is the effect that therapists' behaviour needs to have during sessions upon family members; it is not their disposition. She explains this effect in this way:

Let us imagine that when one of our team members has terminated his interview with the family ... an interviewer approaches the family and asks the various members their impressions of the therapist ... the various members of the family will have plenty to say about the personality of the therapist (his possession or lack of intelligence, human warmth, agreeability, style, etc.) However, if they are asked to state whom he had supported or sided with or what judgement he had made concerning one or another individual or his respective behavior (sic) or of the entire family, they should remain puzzled and uncertain.

In fact, as long as the therapist invites one member to comment upon the relationship of two other members, he appears at that time to be allied to that person. However, this alliance shifts the moment he asks another family member and yet another to do the same. The end result of the successive alliances is that the therapist is allied with everyone and no one at the same time...

In fact, it is our belief that the therapist can be effective only to the extent that he is able to obtain and maintain a different level (*metalevel*) from that of the family.<sup>18</sup>

[There is a discussion of *meta position* below. Essentially the word is used to indicate the detachment and distance which enables consultants (and consultors) to think about things from an independent perspective, to overview things, to rise above or to transcend the existential realities as experienced by the consultor.]

#### 2. Systems Consultation (SC) Concept

Wynne and his colleagues "use the concept of 'systems consultation' to refer to the application of systems concepts and principles in consultations not only with families but also with other systems such as medical programs (sic), the courts and community networks".<sup>19</sup> As becomes clear below, the application is much wider than this. In fact SC is an approach

and methodology which enables people to use systems theory to think systemically about purposeful endeavour carried out in and through a wide range of organizational systems.

A definition of a system is "any organized collection of parts united by prescribed interactions and designed for the accomplishment of specific goals or general purposes".<sup>20</sup> Another is, "a system is an organized whole made up of interdependent elements that can be defined only with reference to each other and in terms of their position in the whole".<sup>21</sup>

Family therapists, says Wynne, "have embraced systems theory enthusiastically and often uncritically ... [they] have taken as axiomatic the principle that the family unit *is a system* that is more than its individual members".<sup>22</sup> (Italics are mine.) An identified danger is "that 'system' means the family and little or nothing more".<sup>23</sup> Whereas, a distinctive feature of *systems* consultation is that the consultant explicitly attempts to consider the multiple contexts or systems of the presenting problem".<sup>24</sup> Edwin H Friedman, demonstrates this through successfully applying family systems theory to "religious work systems" (see below). He bases his systems theory praxis on five interrelated concepts: the identified patient; homeostasis (balance); differentiation of self; the extended family field; emotional triangles (or triangular sub-systems).<sup>25</sup> A further factor he notes in a piece of systems thinking is, the importance of focussing on "systemic process issues" as well as on content.<sup>26</sup>

Therefore, SC treats socio-religious entities with which they are working *as systems* "which consultants join for a brief period of time"... and "remain meta to the system so that the consultee retains primary responsibility for decision making and for any change that may occur".<sup>27</sup> It is possibly more accurate to say that SC operates through the interaction between two groups of systems, that of the client and that of the consultant. Be this as it may, the significant point is that SC treats clients in their socio-religious work entities and consultants in their teams, procedures and methodologies *as systems*. Distinctions made by Checkland and Scholes between "hard systems thinking "and "soft systems thinking" (cf Mode 1, Model 1) are not made by Wynne and his co-writers.

Consultation is used "to denote the process in which a *consultee* seeks assistance from a consultant in order to identify or classify a *concern* or problem and to consider the options open for problem resolution".<sup>28</sup> But in SC the problem does not necessarily result from consultees being sick nor indicate that they are sick. It is about normal healthy practitioners seeking help with problems that they could be expected to encounter.

# 3. From Systemic Family Therapy to Systems Consultation: Some Critical Issues

Many of the same principles govern both the practice of family therapy and consultation. This could mask critical differences and deflect practitioners from a critical question, "*Can systems theory as used by family therapist be applied directly as a model for consultation?*"<sup>29</sup> Several practitioners who have contributed studies to *Systems Consultation* say that it can. Friedman, already mentioned, is one of these. Others think systems theory alone is not an adequate model for consultation.<sup>30</sup> Some of these, for instance, combine a family systems model with an organizational development/group relations model.<sup>31</sup> Borwick is one of those who takes this stance especially in relation to consulting to business organizations. He claims that: "Family therapists who consult to business must take up the role of organizational consultants rather than function as family therapists who happen to be working with business organizations".<sup>32</sup> Borwick believes that consultants must "drop the role of therapist and the

mental map of the family territory" and educate themselves about the business context: "practicing (sic) consultants will find", he claims, "that the technique presently employed for families cannot be simply lifted from one system and implanted in another".<sup>33</sup> Wynne concludes the discussion on these differences in this way.

In summary, systems theory provides a broad generalized framework for family therapists who work as consultants, but there are many variations in the details of how the theory is applied in relation to differing goals and diverse contexts.<sup>34</sup>

Broadly speaking the **similarities** are that both practise a systems theory approach which can be used to conceptualize therapy and consultation work <sup>35</sup> and undertake brief problem centred commissions.<sup>36</sup> Basically, it seems the **differences** relate to the distinctions between a *medical model*, family therapy, and an *inter-professional consultancy service model*, systems consultation. I have set out these differences identified and described by Wynne in Display 3:4. on the next page.

Reflecting on Display 3:4 it seems to me that it presents an ideal model of "consultation" but a somewhat dated model of "family therapy". Thus the comparison is distorted because it does not contrast like with like. Increasingly, therapists in particular and medics in general, would find some of the points at variance with their practice and therefore possibly offensive. As I understand it, in medical praxis emphasis is increasingly placed upon: dialogue; the mutual sharing by doctors and patients of critical information; patients/clients actively involved as partners with doctors/therapists in their healing processes; patients taking seriously their own responsibilities for themselves, their bodies, healing and well-being. Nonetheless, by polarising the differences, and possibly parodying them, the points made indicate how the models could differ in theory and practice and what could be involved in making the transition in either direction. Also, the display shows that using the concepts and methodologies of systemics in consultations and family therapy involves different approaches, attitudes and relationships.

Family Therapy	Consultation	
A therapeutic/medical model oriented to "healing pathology".	An inter-professional developmental model.	
Focusses on patients and their malfunctioning.	Focusses on consultors and their functioning in their work <i>and</i> on their work, its opportunities and problems.	
	Builds on healthy resources and competences.	
Tends to downplay capabilities for self direction and autonomy of "patient", "client" subtly	Self-direction and autonomy of clients are fundamentals of consultation.	
Therapist takes direct and primary responsibility for facilitating change.	Consultee, not consultants, retains explicit responsibility for change and consultant remains meta to consultee system.	
Patients, having accepted possibility of illness, are expected to allow infringement of customary privacy to facilitate diagnosis and treatment. Therapist expected to act in a trustworthy manner, to accept care-taking responsibility, without time limits, and to provide therapy aid with resolution of problem.	Focusses upon consultees' concerns and his/her role is time limited.	
Acknowledged pressure to accept interpretation or limit setting or directives in order for therapy to be effective.	Consultee is understood to be free to accept or reject consultative advice. Consultant is basically adviser to consultee.	
(Notion of transference in therapy implies a quasi-coercive pressure to carry out therapist's expectations.)	General absence of transference.	
Implies a helper-helpee (or? helpless) relationship.	A relationship of colleagues is usually sought or expected between consultant and consultee.	
Educational component less explicit although generally unacknowledged educational component in all psychotherapy even though primary aim is to modify a form of beheaviour/disorder.	Educational component more explicit. Thus can more readily and explicitly be oriented to health and assets than can therapy which by definition is oriented to "healing pathology".	

## Identified by Wynne, Mc Daniel and Weber and Charted by the Author <sup>37</sup>

## **III** Praxis of the Model [element (b)]

#### 1. Modus Operandi

"Consultation" is used "to denote the process in which a *consultee* seeks assistance from a *consultant* in order to identify or clarify a *concern* or problem and to consider the options available for problem resolution".<sup>38</sup> It has three primary components: consultees, people seeking help with work problems; the consultee's concern; the consultant.<sup>39</sup> Wynne advocates "seven processes of consultation":

- (a) exploring the possibility of consultation;
- (b) contracting;
- (c) connecting (i.e. determining who the key members of the consultation are and how they will be involved and giving the consultation context);
- (d) assessing (situation, approach and methods);
- (e) implementing;
- (f) evaluating;
- (f) leaving.

An extensive list of questions flesh out the content of these processes and indicate how to promote and pursue them<sup>40</sup>. Wynne prefers the term *processes* to *stages* "in order to highlight their fluidity and overlap. 'Stages' connotes a fixed progression from one step to the next, whereas 'process' more accurately describes how these steps intertwine... For example, during the connecting process, the consultant is also assessing the structure of the organization".<sup>41</sup> (This is supplemented by a section on "techniques of consultation" and a section on "losing your way" as a consultant".<sup>42</sup>)

These processes are the overall structure within and through which systems theory and thinking can be applied and pursued.

Two overriding features of the consultant's role are noted. The first is the need for a map. Consultants are likened to hikers in uncharted terrain who need a conceptual map which indicates the limits of the consultant's professional domain. They do *not* propose

a specific map for consultation, that is, a fixed set of directions as to how to proceed, what turns to make, or how far to go down the path before changing course. That kind of map fixes a consultant on a too narrow, preconceived route that impairs recognition of the unique contours and alternative pathways in the terrain of a specific consultation. Consultants who are focussed on their own agenda rather than on the unique problems and needs of the consultee's territory are on a perilous course.<sup>43</sup>

Secondly, consultants need to take a "comprehensive meta view" or position throughout consultations. *Meta* is used to indicate the position consultants need to be in if they are to be most effective. Negatively, as I understand it, by taking a meta view or position consultants avoid taking responsibility from consultors for decisions or action; they do not take consultor's parts or roles. Positively it defines a view or position which enable consultants to enter into close critical and creative engagement with the consultor and their situation and systems and at the same time to have the detachment and distance which enables them to

think about things from an independent perspective, to overview things, to rise above or to transcend the existential realities as experienced by the consultor. This distinctive feature of systems consultation means that consultants "explicitly attempt to consider the multiple contexts or systems of the presenting problem".<sup>44</sup> The practice of circularity discussed earlier, for instance, helps consultants to get into a meta position and for consultors to see that they are operating from a meta view.

Consultants exercise a multiplicity of roles in systems consultations to people in their work domains. These roles are illustrated through the extensive case studies. Consultants variously act as:

- broker or "triage" person i.e. consultors with information about relevant experience or services; <sup>45</sup>
- convenor; <sup>46</sup>
- educator; <sup>47</sup>
- evaluator;<sup>48</sup>
- facilitator.49

Six advantages of CS are claimed by Wynne, McDaniel and Weber. They are:

- (a) the nature of the problem is not prejudged;
- (b) consultants (and, I would add, consultors) can advantageously take a meta position from which systemic relationships and patterns can be assessed;
- (c) CS facilitates the reframing of problems;
- (d) CS can readily emphasize health, strengths and positive resources;
- (e) collaborative relationships between consultant and consultee can be readily established;
- (f) the consultant role provides a base for flexible shifts to alternative professional roles.<sup>50</sup>

#### **2.Operational Modes**

SC operates through consultancy arrangements which range from consultants working with individuals to organizations over varying lengths of time. Consultations with organizations may include sub-contracts with specific groups or individuals.<sup>51</sup> Several operational modes can be discerned from the rich array of case study material in *Systems Consultations*. Consultations are variously effected through individual consultants and groups or teams of consultant. And consultants variously engage with:

- individual practitioners, consultees, such as therapists, medics, clergy, organizational leaders;
- groups of practitioners, consultees;
- teams;
- organizations either with the organization as a whole or some of its subsystems;<sup>52</sup> (Edwin H Friedman in his work with organizations aimed his "consultation at leadership in a 'trickle-down' phenomenon in which the organizational functioning will follow that of its leadership".<sup>53</sup>)

• a systems perspective case consultation group. (An example is given of a multi-disciplinary faculty development group with some six members from a family medicine faculty in a university.<sup>54</sup> They operated as a co-consultancy or a reciprocal consultancy group, cf Chapter Six, Model 2.)

For the most part consultations were conducted through face-to-face engagement formally in a structured manner. But there was an interesting use of "speaker phone conferences".<sup>55</sup> And some consultations were informal and unstructured.<sup>56</sup> Interviewing played a key part.

One consultation project, Family Consultation in Psychiatric Emergency Programs,<sup>57</sup> was seen to lend itself to an organizational development (OD) consultation and to have similarities to a research project.<sup>58</sup>

Some consultants are "outsiders" to the consultor's work system, others are "insiders" and seen as such. But some are seen in both relationships. The outside consultant "joins the system for a brief period of time to accomplish ... goals".<sup>59</sup> In some, possibly many, both inside and outside consultants form or "become a component of a new consultation system (composed of consultant, consultee and client or problem)..."<sup>60</sup> Whatever their relationship might be, they have to take a "comprehensive 'meta' view" of the systems and issues.<sup>61</sup> Outside, and to some extent inside consultants have to avoid invading the systems or seen as an "invader".<sup>62</sup> These different consultancy systemic relationships and their implications are thoroughly explored.<sup>63</sup>

# IV Application: Work Settings to which the Model is Applicable [element(c)]

Wynne, McDaniel and Weber have collated and edited a wide range of case study material in *Systems Consultation* which shows how CS has been applied effectively to the following areas, mostly secular work systems but including some significant religious or socio-religious work systems.<sup>64</sup>

- Mental health systems, egs consultations with mental health professionals and mental health teams.<sup>65</sup>
- Medical contexts, eg. consultations with health care organizations, using a group as a consultant in a systems approach to medical care. <sup>66</sup>
- Community groups and service systems, eg. consultations with agencies dealing with domestic violence and with clergy and schools. <sup>67</sup>
- Military and business systems, egs. consultation with military, the family therapist as business consultant.

SC is shown to be an effective prologue to therapy.<sup>69</sup> In a chapter entitled "The Territory of Systems Consultation" Wynne shows that SC flows into and out of four domains or territories which are linked by four continua:

- the therapy-consultation continuum
- the teaching -consultation continuum
- the supervision -consultation continuum
- the administration-consultation continuum.

The role and function of consultants change as consultations enter into and move out of different territories. Role clarity is, they say, of central importance.<sup>70</sup>

## V Understanding of Consultor's Work [element (d)]

Consultants differ about whether family systems theory and, therefore CS, can be directly applied to any other system. Some consultants think it can others think not without supplementary knowledge and adaptation to the given context. (See the earlier note in Section II, 2.) Similarly, opinion varies about whether knowledge and experience of consultors' disciplines or of their languages are necessary or simply an advantage or not necessary. However this may be, Wynne et al, emphasizes that consultation is not a panacea: other forms of professional relationships are needed; consultation can be a precursor and support to such relationships. Having made this point they most helpfully indicate some of the circumstance when consultation is inadvisable or inappropriate. They are:

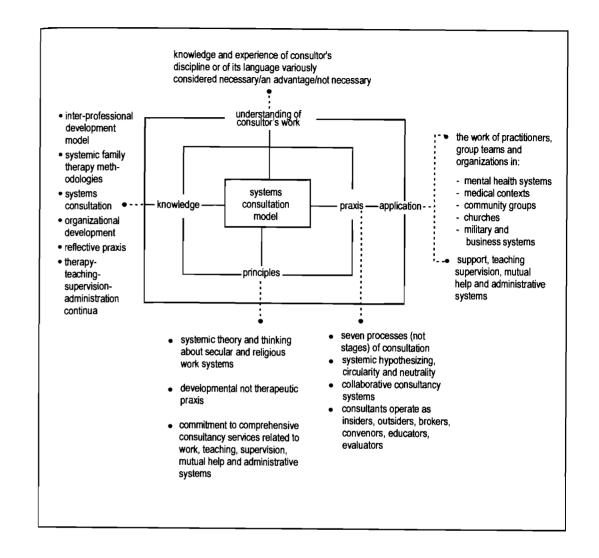
- (a) when it is impossible for the consultant to become meta to the system;
- (b) when another professional relationship better suits the need for example when the would be consultor needs directive supervision or a mentor;
- (c) when the consultation role would not fit in with other support and consultancy arrangements. <sup>71</sup>

## VI Principles [element (e)]

Principles, values and assumptions are apparent in the description of this model. They relate to the following basic concepts. *First* there is the conviction that fundamentals of family therapy praxis can be applied to organizational development. *Second* there is the commitment to the application of hard rather than soft systems praxis to secular and religious human work systems. *Third* there is the emphasis upon developmental rather than therapeutic praxis, which can be a prologue to therapy. *Fourth* there is the need to provide comprehensive and interrelated consultancy services in relation to work, support, teaching supervision, mutual help and administrative systems.

## VII A Summary of Key Features of the Model

SC emerges as a multiple purpose model or group of models based in various ways upon the approach and methodologies developed out of systemic family therapy praxis. Basic elements of SC are modelled in Figure: 3:5 on the next page.





#### References and Notes: Model One: Soft Systems Methodology

- 1. Checkland, Peter and Scholes Jim (1990) Soft Systems Methodology in Action (John Wiley and Sons)
- 2. ibid., pp15-16 cf p22
- 3. ibid., p23
- 4. ibid., p45
- 5. ibid., p22
- 6. ibid., pp25f
- 7. ibid., p23
- 8. ibid., p286
- 9. ibid., p19-23
- 10. ibid., p23
- 11. ibid., p4 This correlates with the work of Humberto Maturana and Francisco Varela, they talk about "perturbations" see Chapter Three and reference 14
- 12. ibid., pp27, 62, et al
- 13. ibid., p xiv
- 14. ibid., p27
- 15. ibid., p286-287 et al
- 16. ibid., pp33-35
- 17. ibid., p35
- 18. ibid., p35
- 19. ibid., p xiv
- 20. ibid., p xiv. It is interesting to note that in Soft Systems Methodology in Action the first 58pp of the 329pp of this book are dedicated to introducing and describing the basic methodology and 238 to describing in great detail its application and development through researching and "getting and learning the lessons".
- 21. ibid., p60
- 22. ibid., p73
- 23. ibid., p235
- 24. ibid., p109
- 25. ibid., p151 cf 8, 45, 279
- 26. ibid., p192
- 27. ibid., p177
- 28. ibid., p228 cf 214, 203, 296
- 29. ibid., pp281f
- 30. ibid., p282
- 31. ibid., p283 cf 163,192, 290, 297
- 32. ibid., p89
- 33. ibid., p89f
- 34. ibid., p59
- 35. ibid., p278
- 36. ibid., p279
- 37. ibid., p91
- ibid., p287 et al
- 39. ibid., p235-236
- 40. ibid., p215 cf p276: "Unfortunately, although there is 'high ground where practitioners can make effective use of research-based theory and technique', there is also a swamp lower down in which lie the 'confusing 'messes' incapable of technical solution'; and it is in the swamp that we find 'the problems of greatest human concern." Checkland and Scholes quoting Schon.

- 41. ibid., pp286-287
- 42. ibid., pp288-289, cf 294 and 42
- 43. ibid., p91 cf 180

#### **References and Notes:**

#### Model Two: Systems Consultation and Systemic Family Therapy

- 1. Wynne, Lyman C; McDaniel, Susan H; Weber, Timothy T (Eds) (1986) Systems Consultation: A New Perspective for Family Therapy (The Guilford Press)
- 2. Kee, Cynthia, in an article in Weekend Observer for the 27th of March 1988 entitled, "Family Circles", p35.
- 3. Mara Palazzoli quotes Bateson in a seminal article "Hypothesizing Circularity Neutrality: Three Guide Lines for the Conductor of the Session" by herself, Luigi Boscolo, Glanfranco Cecchin and Gluliana Prata in Family Process, March 1980, Vol 19 Nol and in Palazzoli, Mara Selvini; Anolli, Luigi; DiBlasio, Paola; Giossi, Lucia; Pisano, Innocenzo; Ricci, Carlo; Sacchi, Marica; Ugazio, Valeria (1986) The Hidden Games of Organizations (Pantheon Books, New York) See also Fruggeri, L et al New Systemic Ideas from the Italian Mental Health Movement (Karnac Books) And, Campbell, D; Draper R; Huffington C. (1989) Second Thoughts on the Theory and Practice of the Milan Approach to Family Therapy (Karnac Books).
- 4. See previous reference.
- 5. cf Analysis and Design 188-189 et al; Consultancy Ministry and Mission 65f; 75 et al.
- 6. The KCC Foundation: School of Social and Therapeutic Studies is in association with the Universities of Luton and Northumbria. Its base is 2 Wyvil Court, Trenchold Street, London SW8 2TG. In their prospectus for 2003, Counselling Psychotherapy: Systemic Training with Families, Couples, Individuals and Wider Networks they set out the Foundation's approach to therapy, consultation and supervision and describe a broad band of consultancy services and training courses they provide in several different countries.
- 7. Hypothesizing-Circularity-Neutrality etc, op cit in reference 3
- 8. ibid., p4
- 9. ibid., p6
- 10. ibid., cf p6
- 11. ibid., pp4-5
- 12. Lovell, Analysis and Design p189, cf also pp78 & 91
- 13. 13. ibid., pp188-9
- 14. Palazzoli et al "Hypothesizing Circularity Neutrality " etc. (see ref 3) pp 8-11
- 15. ibid., p9
- 16. ibid., p8
- 17. ibid., pp9-10
- 18. ibid., p11
- 19. Wynne et al Systems Consultation (see ref 6) p3
- Shafritz, Jay M & Ott, J Steven (2001, Fifth edition) Classics of Organization Theory (Harcourt College Publishers) p242
- Palazzoli et al The Hidden Games of Organizations (see ref 2) p175 definition is by Ferdinand de Saussure, 1959
- 22. Wynne et al Systems Consultation (see ref 6) p4
- 23. ibid., p4
- 24. ibid., p9
- 25. Friedman, Edwin H (1985) Generation to Generation: Family Process in Church and Synagogue (the Guilford Press) pp19-39
- 26. Wynne et al Systems Consultation pp 402f
- 27. ibid., p451
- 28. ibid., p8

29. ibid., cf pp450ff 30. ibid., pp 451 ff et al 31. ibid., pp451-452 32. ibid., pp452, Chapter 25 and p 423 33. ibid., pp452, Chapter 25 and p 440 34. ibid., p452 35. ibid., p451 36. ibid., p16-17 cf p451 37. ibid., pp16-19, 451 and 459 38. ibid., p8 39. ibid., pp8-9 40. ibid., pp30-32 41. ibid., p30 42. ibid., pp457-462 and 35-50 43. ibid., p29 44. ibid., pp9 cf 452-455 45. ibid., pp277 and 378f 46. ibid., pp376-378 47. ibid., p223 48. ibid., p453 49. ibid., pp223, 348 and 453 50. ibid., pp9-11 51. ibid., p30 52. ibid., pp461, 423-446 53. ibid., p461 54. ibid., pp181-198 55. ibid., p81 56. ibid., pp326, 355 57. ibid., pp115-131 58. ibid., p130 cf pp145 and 342 59. ibid., p451 60. ibid., p9 61. ibid., pp9, 452-455 62. ibid., pp80, 329, 458 et al 63. ibid., pp9, 451-462 64. Friedman, Generation to Generation p202 and Wynne et al Systems Consultation p8 65. Wynne et al Systems Consultation pp51-136 66. ibid., pp137-249 67. ibid., pp251-379

- 68. ibid., pp381-446
- 69. ibid., p469
- 70. ibid., pp16-28
- 71. ibid., pp471-472